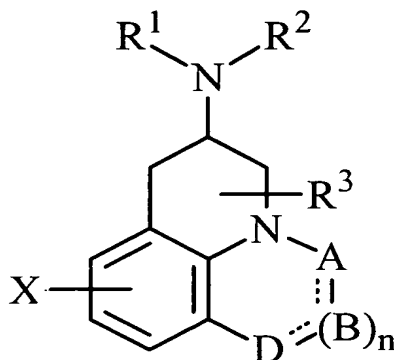


WHAT IS CLAIMED IS:

1. A method of treating or suppressing the symptoms
5 of at least one disorder selected from addictive
disorders, psychoactive substance use disorders,
intoxication disorders, inhalation disorders, alcohol
addiction, tobacco addiction, and nicotine addiction,
said method comprising the step of administering a
10 therapeutically effective, nontoxic amount of an active
agent selected from the group consisting of a
heterocyclic amine, a phenylazacycloalkane, a
cabergoline, an aromatic bicyclic amine, and
pharmaceutically acceptable derivatives or salts of any
15 said active agent, to a patient in need of treatment.

wherein said
active agent is a
het. amine.

2. The method of claim 1 wherein the active
agent is a heterocyclic amine of the formula:



(I)

or a pharmaceutically acceptable salt thereof, wherein:

R^1 , R^2 , and R^3 are each independently hydrogen, C_{1-6}

alkyl, C_{3-5} alkenyl, C_{3-5} alkynyl, C_{3-7} cycloalkyl,

5 C_{4-10} cycloalkyl- or phenyl- substituted C_{1-6} alkyl, or R^1
and R^2 are joined to form a C_{3-7} cyclic amine which can
contain additional heteroatoms and/or unsaturation;

n is 0 or 1;

10 X is hydrogen, C_{1-6} alkyl, halogen, hydroxy, alkoxy,
cyano, carboxamide, carboxyl, or carboalkoxyl;

A is CH , CH_2 , CH -halogen, $CHCH_3$, $C=O$, $C=S$, $C-SCH_3$,
 $C=NH$, $C-NH_2$, $C-NHCH_3$, $C-NHCOOCH_3$, $C-NHCN$, SO_2 , or N ;

B is CH_2 , CH , CH -halogen, $C=O$, N , NH , $N-CH_3$, or O ;

and

15 D is CH , CH_2 , CH -halogen, $C=O$, O , N , NH , or $N-CH_3$.

3. The method of claim 2, wherein:

D is N or NH , n is 0, and R^1 , R^2 , R^3 , X , A , and B are
as defined in claim 2; or

20 A is CH , CH_2 , $CHCH_3$, $C=O$, $C=S$, $C-SCH_3$, $C=NH$, $C-NH_2$,
 $C-NHCH_3$, $C-NHCOOCH_3$, or $C-NHCN$, and R^1 , R^2 , R^3 , n , X , B ,
and D are as defined in claim 2; or

A is CH or $C=O$, and R^1 , R^2 , R^3 , n , X , B , and D are as
defined in claim 2.

25

4. The method of claim 2 wherein the active agent
is selected from the group consisting of:

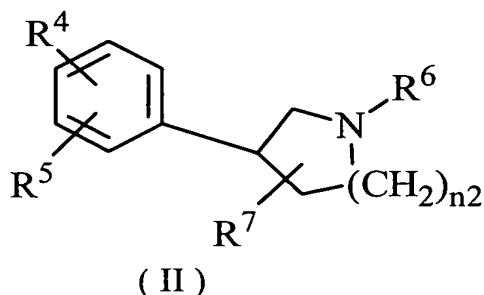
(5R)-5-(methylamino)-5,6-dihydro-4H-imidazo[4,5,1-ij]quinolin-2(1H)-one;

(5R)-5-(methylamino)-5,6-dihydro-4H-imidazo[4,5,1-ij]quinoline-2(1H)-thione;

5 (5R)-5-(methylamino)-5,6-dihydro-4H-imidazo[4,5,1-ij]quinoline-2(1H)-thione maleate; and

(5R)-5-(methylamino)-5,6-dihydro-4H-imidazo[4,5,1-ij]quinoline-2(1H)-thione 2-butenedioate.

10 5. The method of claim 1 wherein the active agent is a phenylazacycloalkane compound of the formula:



15

or a pharmaceutically acceptable salt thereof, wherein:

n_2 is 0-3;

R^4 and R^5 are independently hydrogen, -OH, CN, CH_2CN ,

2- CF₃, 4-CF₃, CH₂CF₃, CH₂CHF₂, CH=CF₂, (CH₂)₂CF₃, ethenyl,
2-propenyl, OSO₂CH₃, OSO₂CF₃, SSO₂CF₃, COR⁷, COOR⁷, CON(R⁷)₂,
SO_{x1}CH₃, wherein x1 is 0-2, SO_{x1}CF₃, O(CH₂)_{x1}CF₃, SO₂N(R⁷)₂,

CH=NOR⁷, COCOOR⁷, COCOON(R⁷)₂, C₁₋₈ alkyl, C₃₋₈ cycloalkyl,

5 CH₂OR⁷, CH₂(R⁷)₂, NR⁷SO₂CF₃, NO₂, halogen, a phenyl at
positions 2, 3 or 4, thienyl, furyl, pyrrole, oxazole,
thiazole, N-pyrroline, triazole, tetrazole or pyridine;
provided that at least one of R⁴ and R⁵ is a substituent
other than hydrogen and provided that when R⁴ or R⁵ is -OH
10 R⁷ is other than hydrogen;

R⁵ is hydrogen, CF₃, CH₂CF₃, C₁₋₈ alkyl, C₃₋₈
cycloalkyl, C₄₋₉ cycloalkyl-methyl, C₂₋₈ alkenyl, C₂₋₈
alkynyl, 3,3,3-trifluoropropyl, 4,4,4-trifluorobutyl,
-(CH₂)_m-R⁸, wherein m is 1-8, CH₂SCH₃ or a C₄₋₈ alkyl
15 bonded to said nitrogen and one of its adjacent carbon
atoms inclusive to form a heterocyclic structure;

R⁷ is independently hydrogen, CF₃, CH₂CF₃, C₁₋₈ alkyl,
C₃₋₈ cycloalkyl, C₄₋₉ cycloalkyl-methyl, C₂₋₈ alkenyl,
C₂₋₈ alkynyl, 3,3,3-trifluoropropyl,

20 4,4,4-trifluorobutyl, -(CH₂)_m-R⁸, wherein m is 1-8;

R⁸ is phenyl optionally substituted with a CN, CF₃,
CH₂CF₃, C₁₋₈ alkyl, C₃₋₈ cycloalkyl, C₄₋₉
cycloalkyl-methyl, C₂₋₈ alkenyl, C₂₋₈ alkynyl,
2-thiophenyl, 3-thiophenyl, -NR⁹CONR⁹R¹⁰, or -CONR⁹R¹⁰; and

25 R⁹ and R¹⁰ are each independently hydrogen, C₁₋₈
alkyl, C₃₋₈ cycloalkyl, C₄₋₉ cycloalkylmethyl, C₂₋₈

alkenyl or C₂-C₈ alkynyl.

6. The method of claim 5 wherein:

R⁴ is CN, and n₂, R⁵, R⁵, and R⁷ are as defined in
5 claim 5; or

R⁵ is H, R⁶ is n-propyl, and n₂, R⁴, and R⁷ are as
defined in claim 5; or

R⁴ is -OSO₂CF₃, and n₂ and R⁵-R⁷ are as defined in
claim 5; or

10 R⁵ is H, R⁶ is C₁₋₈ alkyl, and n₂, R⁴, and R⁷ are as
defined in claim 5; or

R⁴ is 3-OH, R⁵ is H, R⁶ is n-propyl, R⁷ is a C₁₋₈
alkyl, and n is as defined in claim 5; or

n₂ is 2, and R⁴-R⁷ are as defined in claim 5; or

15 n₂ is 0, and R⁴-R⁷ are as defined in claim 5.

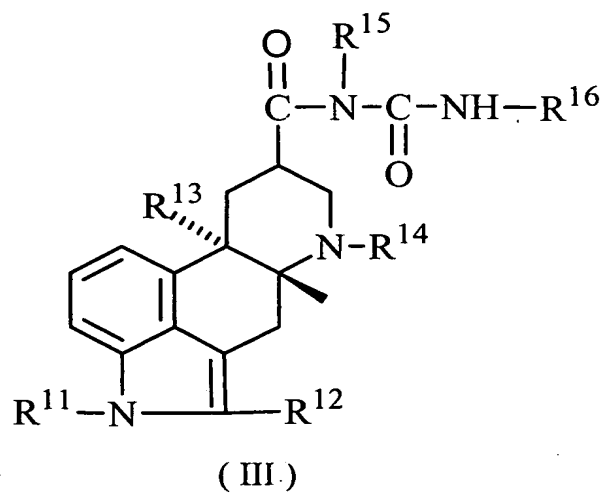
7. The method of claim 5 wherein the
phenylazacycloalkane compound is selected from the group
consisting of:

20 (3S)-3-[3-(methanesulfonyl)phenyl]-1-propylpiperidine
hydrochloride;

(3S)-3-[3-(methanesulfonyl)phenyl]-1-propylpiperidine
hydrobromide; and

(3S)-3-[3-methanesulfonyl)phenyl]-1-propylpiperidine
25 (2E)-2-butenedioate.

8. The method of claim 1 wherein the active agent
is a cabergoline of the formula:



5

10 or a pharmaceutically acceptable salt thereof, wherein:

R¹¹ is hydrogen or methyl;

R¹² is independently hydrogen, halogen, methyl,

formyl, S-R¹⁷, or SO-R¹⁷, wherein R¹⁷ is C₁-C₄ alkyl or phenyl;

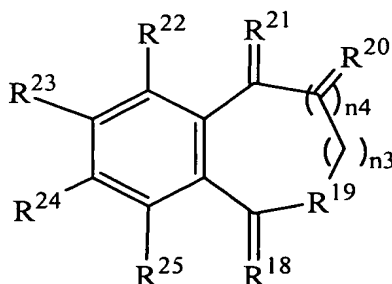
R¹³ is hydrogen or methoxy;

R¹⁴ is independently C₁-C₄ alkyl, C₁-C₄ alkenyl, C₁-C₄ alkynyl, benzyl, or phenyl; and

R¹⁵ and R¹⁶ are each independently C₁-C₄ alkyl, cyclohexyl, benzyl, phenyl optionally substituted with halogen or methoxy, or (CH₂)_{n3}N(CH₃)₂, wherein n3 is an integer.

9. The method of claim 8 wherein the active agent is 1-((6-allylergolin-8β-yl)carbonyl)-1-(3-(dimethylamino)propyl)-3-ethylurea.

10. The method of claim 1 wherein the active agent is an aromatic bicyclic amine compound of the formula:



(IV)

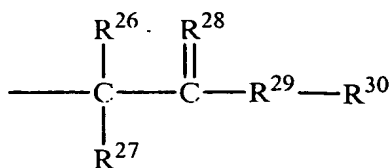
wherein:

n3 is 0 or 1;

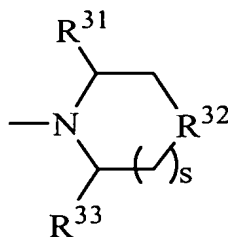
n4 is 0 or 1, provided that R²⁰ is not present when

n4 is 0;

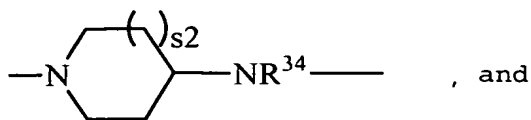
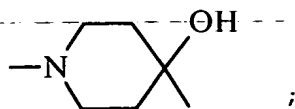
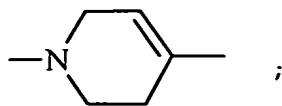
- 5 R¹⁸ is α-R¹⁸⁻¹:β-R¹⁸⁻² where one of R¹⁸⁻¹ or R¹⁸⁻² is selected from the group consisting of H or C₁-C₆ alkyl, and the other of R¹⁸⁻¹ or R¹⁸⁻² is a group of the formula:



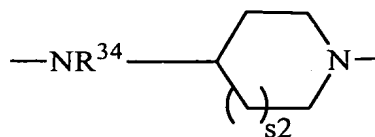
- 10 wherein R²⁶ and R²⁷ are independently selected from H or C₁-C₆-alkyl; R²⁸ is oxygen (O) or R²⁸ is α-R²⁸⁻¹:β-R²⁸⁻², wherein R²⁸⁻¹ and R²⁸⁻² are independently selected from H or C₁-C₆ alkyl; R²⁹ is selected from the group consisting of:



- 15 wherein R³¹ and R³³ are independently selected from H or C₁-C₆ alkyl; R³² is nitrogen (N-) or methine (HC-); and s is 1 or 2;



wherein R^{34} is selected from the group
consisting of H, C_1 - C_6 alkyl, C_3 -C, cycloalkyl, $-C_1$ - C_3
alkyl- (C_3 -C, cycloalkyl); and s_2 is 0, 1, or 2;



wherein R^{34} and s_2 are as defined above;

R^{19} is oxygen (O) or sulfur (S);

R^{20} is α - R^{20-1} : β - R^{20-1} , wherein one of R^{20-1} and R^{20-2} is
H, C_1 - C_6 alkyl, and the other of R^{20-1} or R^{20-2} is H, C_1 - C_6
alkyl, phenyl, hydroxy, and $-O$ - (C_1 - C_3 alkyl);

R^{21} is α - R^{21-1} : β - R^{21-1} , wherein one of R^{21-1} and R^{21-2} is

H, C₁-C₆ alkyl, and the other of R²¹⁻¹ or R²¹⁻² is H,
C₁-C₆ alkyl, phenyl, hydroxy, and -O-(C₁-C₃ alkyl);

and when n₄ is 1, one of R²⁰⁻¹ or R²⁰⁻² and one of R²¹⁻¹
or R²¹⁻² can be taken together with the carbon atoms to

5 which they are attached to form a carbon ring of 5-, 6-,
or 7- members;

R²² is H, F, Cl, Br, I, -CONR³⁵R³⁶, -SONR³⁵R³⁶, CF₃,
NR³⁵R³⁶, NO₂, CN, -NR³⁵-CO-R³⁶, -SO₂CF₃, C₁-C₄ alkyl, Si(CH₃)₃,
and phenyl optionally substituted with one or two
10 substituents selected from the group consisting of F, Cl,
Br, I, and -CO-NR³⁵R³⁶, wherein R³⁵ and R³⁶ are
independently selected from the group consisting of H, C₁-
C₆ alkyl, C₃-C₇ cycloalkyl, and -C₁-C₃ alkyl-(C₃-C₇
cycloalkyl);

15 and where R²² and one of R²¹⁻¹ or R²¹⁻² are taken
together with the carbon atoms to which they are attached
to form a carbon ring of 5-, 6-, or 7-members;

R²³ is H, F, Cl, Br, I, -CONR³⁷R³⁸, -SONR³⁷R³⁸, CF₃,
NR³⁷R³⁸, NO₂, CN, -NR³⁷-CO-R³⁸, -SO₂CF₃, C₁-C₄ alkyl, Si(CH₃)₃,
20 and phenyl optionally substituted with one or two
substituents selected from the group consisting of F, Cl,
Br, I, and -CO-NR³⁷R³⁸, wherein R³⁷ and R³⁸ are
independently selected from the group consisting of H, C₁-
C₆ alkyl, C₃-C₇ cycloalkyl, and -C₁-C₃ alkyl-(C₃-C₇
25 cycloalkyl);

R²⁴ is H, F, Cl, Br, I, -CONR³⁹R⁴⁰, -SONR³⁹R⁴⁰, CF₃,
NR³⁹R⁴⁰, NO₂, CN, -NR³⁹-CO-R⁴⁰, -SO₂CF₃, C₁-C₄ alkyl, Si(CH₃)₃,
and phenyl optionally substituted with one or two
substituents selected from the group consisting of F, Cl,
30 Br, I, and -CO-NR³⁹R⁴⁰, wherein R³⁹ and R⁴⁰ are
independently selected from the group consisting of H, C₁-
C₆ alkyl, C₃-C₇ cycloalkyl, and -C₁-C₃ alkyl-(C₃-C₇
cycloalkyl);

R²⁵ is H, F, Cl, Br, I, -CONR⁴¹R⁴², -SONR⁴¹R⁴², CF₃,
35 NR⁴¹R⁴², NO₂, CN, -NR⁴¹-CO-R⁴², -SO₂CF₃, C₁-C₄ alkyl, Si(CH₃)₃,

5 C₆ alkyl, C₃-C₇ cycloalkyl, and -C₁-C₃ alkyl-(C₃-C₇
cycloalkyl);

R^{30} is selected from the group consisting of:

2-, 3-, and 4-pyridinyl optionally substituted with

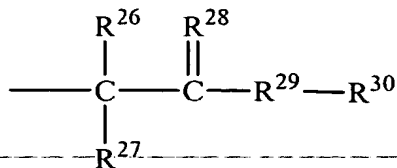
2-, 4-, and 5-pyrimidinyl optionally substituted one or two substituents represented by R⁴⁶;

-C₁-C₃ alkyl-(C₃-C₇ cycloalkyl); and R⁴⁶ is selected from the group consisting of F, Cl, Br, I, -CO-NR⁴⁴R⁴⁵, -SO₂NR⁴⁴R⁴⁵, OH, SH, C₁-C₆ alkyl, C₃-C₆ cycloalkyl, -OR⁴⁷, -CH₂-(C₃-C₆ cycloalkyl), -CH₂-phenyl, C₃-C₆ cycloalkyl, -

enantiomers and diastereomers thereof, where such
c, and pharmaceutically acceptable salts thereof.

11. The method of claim 10 wherein:

- 35 -



wherein R²⁶, R²⁷, R²⁸, R²⁹ and R³⁰ are as defined in claim 10.

5 12. The method of claim 10 wherein the active agent is selected from the group consisting of:

1-(4-fluorophenyl)-4-[2-(isochroman-1-yl)ethyl]piperazine;

1-[2-(isochroman-1-yl)ethyl]-4-phenylpiperazine;

10 1-[2-(isochroman-1-yl)ethyl]-4-(4-methoxyphenyl)piperazine;

(-)-4-[4-[2-(isochroman-1-yl)ethyl]piperazin-1-yl]benzamide; and

15 (-)-4-[4-[2-(isochroman-1-yl)ethyl]piperazin-1-yl]benzenesulfonamide.

13. The method of claim 1 wherein the active agent is used to treat or enhance the treatment of tobacco and/or nicotine addiction.

20 14. The method of claim 1 wherein the active agent is used to reduce the craving for tobacco and/or nicotine containing products.

25 15. The method of claim 1 wherein the active agent

is used to reduce the smoking and/or chewing of tobacco-
or nicotine-containing products.

16. The method of claim 1 wherein the active agent
5 is administered to the patient three times a day.

17. The method of claim 1 wherein the active agent
is selected from the group consisting of a heterocyclic
amine, a phenylazacycloalkane, and a cabergoline
10 administered in a dose of about 0.01 mg/day to about 10.0
mg/day.

18. The method of claim 17 wherein the active agent
is selected from the group consisting of a heterocyclic
15 amine, a phenylazacycloalkane, a cabergoline, and a
cabergoline-type derivative administered in a dose of
about 0.125 mg/day to about 6 mg/day.

19. The method of claim 18 wherein the active agent
20 is administered in an amount from about 0.375 mg/day to
about 5 mg/day.

20. The method of claim 19 wherein the active agent
is administered in an amount from about 0.75 mg/day to
25 about 4.5 mg/day.

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21. The method of claim 17 wherein an initial dose
of active agent of about 0.125 mg/day administered to the
patient three times a day is titrated to higher levels
every five to seven days until therapeutic effect is
5 achieved.

22. The method of claim 1 wherein the active agent
is an aromatic bicyclic amine administered in an amount
of from about 5 mg/day to about 120 mg/day.

10 23. The method of claim 22 wherein the aromatic
bicyclic amine is administered in an amount of from about
20 mg/day to about 100 mg/day.

15 24. The method of claim 23 wherein the aromatic
bicyclic amine is administered in an amount of from about
40 mg/day to about 80 mg/day.

20 25. The method of claim 22 wherein an initial dose
of active agent of about 5 mg/day is administered to the
patient three times a day and is titrated to higher
levels every five to seven days until therapeutic effect
is achieved.

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